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云南楼梯草属六新种

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SEX SPECIES NOVAE ELATOSTEMATIS E YUNNAN

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关键词 微鳞楼梯草; 漾濞楼梯草; 曲毛楼梯草; 河口楼梯草; 显柱楼梯草; 微毛楼梯草
Key words *Elatostema minutifurfuraceum*; *E. yangbiense*; *E. crispulum*; *E. hekouense*; *E. stigmatosum*; *E. microtrichum*

微鳞楼梯草 图1: 3—5

Elatostema minutifurfuraceum W. T. Wang, sp. nov.

Proximum *E. filipedi* W. T. Wang, quod caule glabro haud furfuraceo, foliis minoribus 4—7.9 cm longis 1.4—2.5 cm latis, stipulis pedunculis bracteisque inflorescentiarum masculinarum glabris differt.

Herba perennis. Caulis circ. 28 cm altus, simplex, prope apicem minute ferrugineo-furfuraceus, ad nodos sparse pilosellus. Folia sessilia, herbacea, oblique longeque elliptica, usque ad 13 cm longa, 4.5 cm lata, apice caudato-acuminata, acumine integro, basi latere angustiore cuneata eo latiore subauriculata, margine parte quarta tertiave inferiore integra excepta dentata utrinque glabra, cystolithis conspicuis densis anguste linearibus 0.2—0.4 mm longis, trinervia, nervo basali lateris angustioris sursum supra medium laminae attingente, nervis lateralibus latere angustiore 1 eo latiore circ. 3; stipulae membranaceae, lineares, 1—1.2 cm longae, dorso ad costas puberulae. Inflorescentiae masculinae axillares, tenuiter pedunculatae, 4—7 mm latae, 5—10-florae; pedunculi 8—14 mm longi, sparse puberuli; receptacula inconspicua; bracteae 6, 2 exteriores majores, ovato-naviculares, cornibus exceptis 2.5—3.5 mm longae, apice longe corniculatae, extus sparse puberulae, cornibus 3—3.5 mm longis,

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承中国科学院昆明植物研究所及云南大学生态地植物研究室借予标本，刘春荣和吴彰桦二先生绘图，作者谨表示深切的感谢。

4 interiores minores, triangulares, 2.2—3.5 mm longae, extus sub apicem breviter crasseque corniculatae, cornibus 0.5—0.7 mm longis; bracteolae semihyalinae, late lineares, 2—3 mm longae, apice subcucullatae, glabrae. Flores masculini glabri; tepala 4, late elliptica, circ. 1.5 mm longa, extus sub apicem cornibus o.5 mm longis ornata; stamina 4; pistillodium inconspicuum.

Yunnan: Maguan, Mengdong, Mons Laujunshan, alt. 1650 m, in silvis, fl. viridi-albi, 23 Jun. 1959, Wu Quanan 8621 (Holotypus, KUN).

云南：马关，勐硐公社，老君山，海拔1650米，林中阴湿处，花绿白色，1959年6月23日，武全安8621（模式）。

本种与丝梗楼梯草 *E. filipes* W. T. Wang 极为接近，但茎有软鳞片，在节上有毛，叶较大，托叶，雄花序的梗及苞片均有毛，可以区别；在丝梗楼梯草，茎无软鳞片，无毛，叶较小，长4—7.9厘米，宽1.4—2.5厘米，托叶，雄花序梗及苞片均无毛。

漾濞楼梯草 图1：1—2

Elatostema yangbiense W. T. Wang, sp. nov.

Affine *E. cuspidato* Wight, quod caule haud furfuraceo ramulis axillaribus abbreviatis carente, foliis majoribus usque ad 13 (—23) cm longis 5 (—8) cm latis apice saepe longe cuspidatis subtus glabris, nervibus lateralibus pluribus laminae latere latiore 3—5 distinguitur.

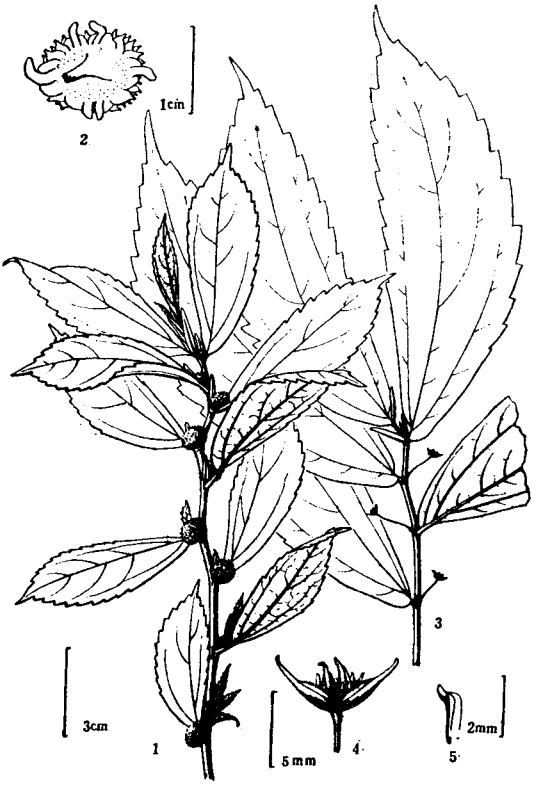

图1. 1—2 漾濞楼梯草 Elatostema yangbiense W.T. Wang, 1.雄株上部；2.雄花序，自下面观。3—5. 微鳞楼梯草 E. minutifurfuraceum W. T. Wang, 3.雄株上部；4.雄花序；5.小苞片。（吴彰桦绘）

Herba perennis. Caulis circ. 33 cm altus, 5 mm crassus, ab axillis foliorum inflorescentias masculinas ramulosque abbreviatos foliatos edens, superne minute brunneo-furfuraceus. Folia breviter petiolata vel subsessilia; laminae tenuiter papyraceae vel herbaceae, oblique oblongae, 3.5—8 cm longae, 1.4—2.4 cm latae, apice acuminatae, acumine brevi lanceolato 4—8 mm longo integro, basi oblique cuneatae vel latere latiore subrotundatae, margine parte tertia inferiore integra excepta dentatae vel denticulatae, supra sparse albo-stri-

gulosae subtus ad nervos sparsissime adpresseque ferrugineo-pilosellae, cystolithis densis conspicuis vel inconspicuis 0.1—0.3 (—0.4) mm longis, semitriplinerves, nervis lateralibus latere angustiore 1 eo latiore 2; petioli 1—4 mm longi, glabri; stipulae membranaceae, lanceolatae vel anguste ovatae, 1—1.6 cm longae, 4 mm latae, glabrae, cystolithis sparsis notatae. Inflorescentiae masculinae axillares, breviter pedunculatae, 4—8 mm diam; pedunculi 1—2 mm longi, robusti, glabri; receptacula suborbicularia, 2.8—5.5 mm diam., glabra; bracteae 6, inconspicuae, apice crasse corniculatae, cornibus 1.5—3.5 mm longis sparse pilosellis; bracteolae densae, membranaceae, oblongae vel lineares, 1.5—2 mm longae, 0.5—1.2 mm latae, apice cucullatae, extus sub apicem breviter corniculatae, glabrae. Flores masculini tetrameri, alabastris 1 mm diam. glabris, cornibus 4 circ. 0.3 mm longis.

Yunnan: Yangbi, Meixi, alt. 2400 m, secus margines silvarum convallium, fl. albo-viriduli, 2 Jun. 1963, Exped. Jinshajiang. 4227 (Holotypus, KUN).

云南：漾濞，美翕公社，上羊木圈，海拔2400米，山谷林边，花白绿色，1963年6月2日，金沙江调查队4227（模式）。

本种与骤尖楼梯草 *E. cuspidatum* Wight 近缘，但茎有小软鳞片，有腋生具叶的短枝，叶较小，顶端渐尖头短，下面在脉上有短伏毛，侧脉较少，在叶片宽侧2条可以区别；在骤尖楼梯草，茎无毛，无具叶短枝，叶较大，长达13(—23)厘米，宽达5（—8）厘米，顶端常长骤尖，下面无毛，侧脉较多，在叶片宽侧3—5条。

曲毛梯楼草　图2：3—4

Elatostema crispulum W. T. Wang, sp. nov.

Ab *E. petelotii* Gagnep. differt caulibus foliisque subtus crispule hirtellis, foliis margine crenato-denticulatis semitriplinervibus, floribus masculinis pentameris.

Herba perennis, saepe monoeca. Caules ascendentes, 26—32 cm longi, 2—4 mm crassi, inferne longe 1—2-ramosi, crispule hirtelli. Folia breviter petiolata vel sessilia;

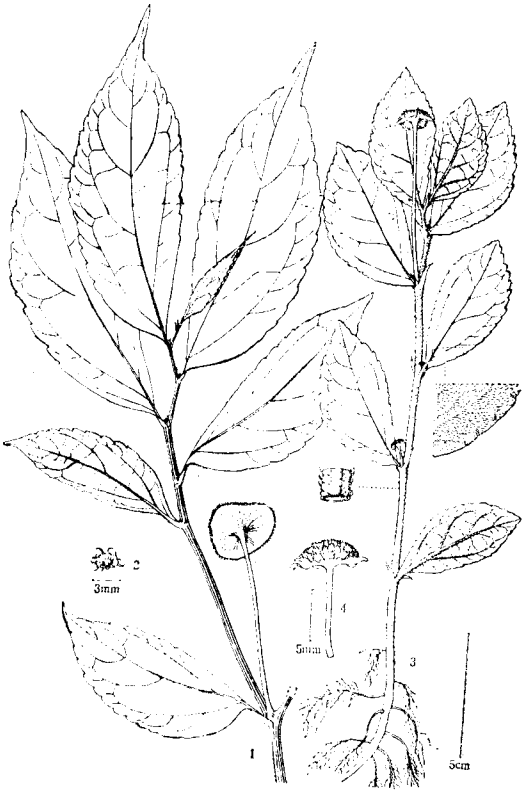

图2. 1—2 河口楼梯草 Elatostema hekouense W. T. Wang, 1.植株上部；2.雌花序。3—4 曲毛楼梯草 E.crispulum W. T. Wang, 3.植株全形；4.雌花序。（刘春荣绘）

laminae siccitate chartaceae, oblique ellipticae, 4—8.4 cm longae, 2.4—3.7 cm latae, apice obtusae vel obtuse breviterque acuminatae, basi oblique cuneatae vel latere angustiore cuneatae eo latiore obtusae, margine crenatae vel crenato-denticulatae, supra glabrae, subtus ad nervos crispule strigulosae, cystolithis supra densissimis valde conspicuis 0.3—0.8 mm longis, semitriplinerves, nervis lateralibus latere angustiore 2 eo latiore 3—4; petioli usque ad 3.5 mm longi; stipulae papyraceae, anguste triangulares vel triangulari-lineares, 5—9 mm longae, 2 mm latae, glabrae, cystolithis densis 0.25—0.5 mm longis. Inflorescentiae masculinae longe pedunculatae, glabrae; pedunculi 5—6.8 cm longi, cystolithis 0.3—0.7 mm longis; receptacula elliptica, circ. 10 mm longa, 5 mm lata; bracteae 6, 2 majores deltoideae, 3 mm longae, 5 mm latae, apice corniculatae, cornibus 2.5 mm longis, 4 minores triangulares, 2 mm longae et latae; bracteolae semihyalinae, naviculari-lineares, 1.2—1.5 mm longae. Flores masculini densi, glabri; tepala 5, obovata, circ. 1.2 mm longa, basi leviter connata, extus sub apicem breviter corniculata; stamina 5; pistillodium nullum. Inflorescentiae femineae pedunculatae, circ. 7 mm latae, glabrae; pedunculi circ. 8 mm longi; receptacula late linearia, circ. 3.5 mm longa, 1 mm lata; bracteae 4, 2 majores subdeltoideae, 2 mm longae et latae, apice corniculatae, cornibus robustis 1.5 mm longis, 2 minores late ovatae 1 mm longae et latae; bracteolae densae, lineares vel oblanceolato-lineares, 1.6—2 mm longae. Flores feminei densi; tepala inconspicua; ovaria anguste ovoidea, circ. 0.6 mm longa.

Yunnan: Yingjiang, Nabang, alt. 350 m, in sylvis pluvialibus convallium, fl. albi, 4 Aug. 1980, Exped. Lab. Geobot. Univ. Yunnan. 10484 (Holotypus in Herb. Lab. Geobot. Univ. Yunnan. conserv.; Isotypus, PE).

云南：盈江，那邦，海拔350米，山谷雨林中，雄花白色，1980年8月4日，云南大学生态地植物研究室滇西调查组10484（模式）。

本种的雌花序有长梗（在楼梯草属中少见），而可能接近樟叶楼梯草 *E. petelotii* Gagnep.，但茎及叶下面被弯曲短硬毛，叶边缘有浅钝齿，有半离基三出脉，雄花五基数，可以区别；在樟叶楼梯草，茎及叶无毛，叶边缘全缘，有三出脉，雄花四基数。

河口楼梯草 图2：1—2

Elatostema hekouense W. T. Wang, sp. nov.

Affine *E. longipedi* W. T. Wang, a quo caulibus altioribus ramosis, foliis basi latere latiore late cuneatis, receptaculis inflorescentiarum masculinarum majoribus suborbicularibus 2.8 cm diam., bracteis inflorescentiarum feminearum longe corniculatis distinguitur.

Herba perennis, monoeca. Caulis circ. 80 cm altus, ramosus, glaber. Folia breviter petiolata vel sessilia, glabra; laminae siccitate herbaceae, oblongo-

obovatae vel oblongae, 6.5—16.5 cm longae, 2.2—5 cm latae, apice acuminatae vel longe acuminatae, acuminibus subintegris, basi oblique cuneatae, margine supra basin obtuse denticulatae, cystolithis supra densis conspicuis vel indistinctis 0.1—0.3 mm longis, semitriplinerves, nervis lateralibus latere angustiore 3 eo latiore 4; petioli usque ad 7 mm longi; stipulae anguste triangulari-lineares vel subulatae, 3.5—4.5 mm longae. Inflorescentiae masculinae axillares, glabrae, longe pedunculatae; pedunculi circ. 7.5 cm longi; receptacula suborbicularia, circ. 2.8 cm diam.; bracteae breves, apice truncatae; bracteolae densae, albae, late lineares, circ. 2 mm longae. Flores masculini numerosi, densissimi, pentameri, alabastris circ. 2 mm diam. glabris. Inflorescentiae femineae in axillis foliorum superiorum sitae, minutae, brevissime pedunculatae; receptacula suborbicularia, circ. 2 mm diam., glabrae; bracteae circ. 9, deltoideae, circ. 0.5 mm longae, margine sparse ciliolatae, apice longe corniculatae, cornibus 0.5—0.8 mm longis; bracteolae densae, virides, spathulatae, circ. 0.4 mm longae, apice dense albo-ciliolatae. Flores feminei minuti.

Yunnan: Hekou, Dungping, in sylvis densis, caules purpureo-virides, fl. masculini cum tepalis 5 et staminibus 5, 10 Jun. 1956, Exped. Yunnan. Sino-Ross. 2382 (Holotypus, KUN).

云南：河口，洞坪，山坡密林中阴处，茎紫绿色，雄花有5花被片及5雄蕊，1956年6月10日，中苏云南考察队2382（模式）。

本种接近长梗楼梯草 *E. longipes* W. T. Wang，但茎较高，分枝，叶基部宽侧宽楔形，雄花序托较大，近圆形，雌花序苞片有长角状突起，可以区别；在长梗楼梯草，茎较低矮，高约28厘米，不分枝，叶基部宽侧耳形，雄花序托较小，椭圆形，长达1.7厘米，雌花序苞片无角状突起。

显柱楼梯草　图3：1—4

Elatostema stigmatosum W. T. Wang, sp. nov.

Affine *E. longipedi* W. T. Wang, a quo caulibus foliis utrinque et pedunculis inflorescentiarum masculinarum superne puberulis, stipulis albis, bracteis inflorescentiarum masculinarum feminearumque longe corniculatis, floribus masculinis tetrameris distinctum.

Herba perennis, dioeca. Caules circ. 20 cm alti, 4 mm crassi, simplices vel inferne breviter 1-ramosi, superne patenter puberuli, supra medium circ. 6-foliati. Folia breviter petiolata vel sessilia; laminae siccitate herbaceae, oblique ellipticae vel longe ellipticae, 7—12 cm longae, 3.5—4.5 cm latae, apice caudatae, caudis integris, basi latere angustiore cuneatae, eo latiore rotundatae, margine supra basin dentatae, supra sparse adpresseque puberulae, subtus ad nervos puberulae, cystolithis supra densiusculis leviter conspicuis 0.1—

0.3 mm longis, semitriplinerves, nervis lateralibus latere angustiore 2 eo latiore 4; petioli usque ad 2.5 mm longi; stipulae membranaceae, lineari-lanceolatae, circ. 9 mm longae, 2.5 mm latae, obtusiusculae, albae, costis viridibus, subglabrae. Inflorescentiae masculinae longe pedunculatae; pedunculi 8—12.5 cm longi, superne patenter puberuli; receptacula elliptica, circ. 12 mm longa, 6 mm lata, sparse puberula; bracteae circ. 9, late ovatae vel deltoideae, 0.5—1 mm longae, glabrae, 2 vel 3 apice corniculatae, cornibus anguste triangularibus 0.8—1 mm longis viridibus; bracteolae semihyalinae, late naviculari-lineares vel lineares, 1.1—2 mm longae, apice saepe cucullatae et laceratae. Flores masculini densissimi, glabri; tepala 4, obovata, circ. 1 mm longa, basi connata, viridia; stamina 4, alba; pistillodium indistinctum. Inflorescentiae femineae axillares, brevissime pedunculatae; receptacula elliptica, circ. 4 mm longa, 2.5 mm lata, glabra; bracteae circ. 30, parvae, deltoideae, circ. 0.5 mm longae, margine sparse ciliolatae, apice longe corniculatae, cornibus 1.3—2 mm longis viridibus; bracteolae densae, lineares vel anguste oblanceolatae, 0.6—1 mm longae, margine superne sparse ciliolatae, majores apice longe corniculatae. Flores feminei parvi, densi; tepala inconspicua; ovaria longe ellipsoidea, circ. 0.5 mm longa, stigmatibus ovariis subaequilongis.

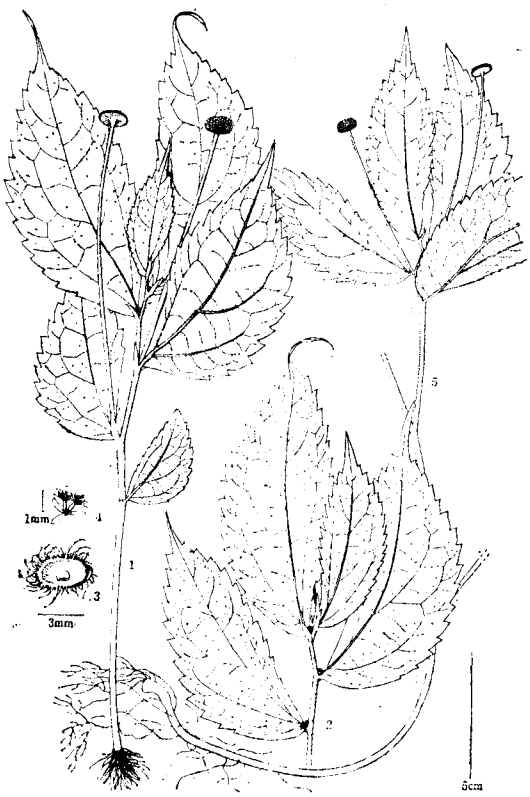

图3. 1—4 显柱楼梯草 Elatostema stigmatosum W. T. Wang, 1.雄株全形; 2.雌株上部; 3.雌花序; 4.雌花及小苞片。5.微毛楼梯草 E. microtrichum W. T. Wang, 雄株一部分。(刘春荣绘)

Yunnan: Jingdong, Xiujiaba, alt. 2470 m, 2 Aug. 1981, Exped. Lab. Geobot. Univ. Yunnan. 13660 (♂, Holotypus in Herb. Lab. Geobot. Univ. Yunnan. conserv.); eodem loco, alt. 2450 m, in sylvis, 29 Jul. 1981, Exped. Lab. Geobot. Univ. Yunnan. 12164 (♀, PE).

云南：景东，徐家坝，海拔2470米，1981年8月2日，云南大学生态地植物研究室滇西调查组13660（♂，模式）；同地，海拔2450米，林中，1981年7月29日，云南大

学生态地植物研究室滇西调查组12164（♀）。

本种接近长梗楼梯草 *E. longipes* W. T. Wang，但茎、叶的两面和雄花序梗上部均被短柔毛，托叶白色，雄花序苞片宽卵形，有角状突起，雄花四基数，可以区别；在长梗楼梯草，茎、叶和雄花序梗均无毛，托叶绿色，雄花序苞片不明显，雄花五基数。

微毛楼梯草　图 3：5

Elatostema microtrichum W. T. Wang, sp. nov.

Affine *E. leucocephalo* W. T. Wang, a quo caulibus foliisque subtus minute puberulis, pedunculis receptaculisque inflorescentiarum masculinarum viridibus, floribus masculinis tetrameris recedit.

Herba perennis. Caulis circ. 30 cm altus, basi 3 mm crassus, prope medium 2-ramosus, superne pilis minutis circ. 0.1 mm longis subadpressis tectus. Folia sessilia vel brevissime petiolata; laminae siccitate papyraceae, oblique ellipticae, 5.5—9.6 cm longae, 2.5—3.8 cm latae, apice acuminatae vel caudato-acuminatae, basi latere angustiore cuneatae eo latiore rotundatae vel subauriculatae, margine dentatae, supra sparsissime strigulosae, subtus ad nervos minute puberulae, cystolithis supra densis conspicuis 0.2—0.4 mm longis, semitriplinerves, nervis lateralibus utrinsecus 3; petioli usque ad 1 mm longi; stipulae lanceolato-lineares, circ. 4.5 mm longae, viridi-albae, costis viridibus, glabrae. Inflorescentiae masculinae axillares, longe pedunculatae; pedunculi 6—7 cm longi, glabri; receptacula late elliptica, 4—7 mm longa, 2.5—6 mm lata, glabra; bracteae circ. 12, deltoideae vel adpresse deltoideae, 0.8—1 mm longae, obtusae, plerumque extus sub apicem breviter crasseque corniculatae; bracteolae late lineares vel lineares, 0.8—1.2 mm longae, interdum apice dilatatae et plus minusve peltatae, albae, subglabrae vel apice sparsissime puberulae. Flores masculini densi; tepala 4, obovata vel anguste obovata, circ. 1.2 mm longa, basi leviter connata, 2 majora extus sub apicem breviter corniculata, glabra vel extus superne sparse puberula; stamina 4; pistillodium circ. 0.1 mm longum.

Yunnan: Tengchung, alt. 2150 m, in sylvis sempervirentibus, caules brunneo-rubri, 26 Jun. 1964, Wu Sugung 7243 (Holotypus, KUN).

云南：腾冲，自治公社，海拔2150米，山坡常绿阔叶林中，茎褐红色，1964年6月26日，武素功7243（模式）。

本种接近白序楼梯草 *E. leucocephalum* W. T. Wang，但茎及叶下面被极短的毛，雄花序的花序梗及花序托绿色，雄花四基数，可以区别；在白序楼梯草，茎及叶下面无毛，雄花序的花序梗及花序托白色，雄花五基数。